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DEVELOPMENT OF THE PLAN FOR A CENSUS OF THE WORLD.*

BY JOHN HOWARD DYNES.

As the preparations for our next census in June, 1900, are arousing general interest, the time is fitting for an account of the project for a world census of which this might be a constituent part. But it may be asked what is meant by a world census; for taking a census is an administrative act, and there is no central administrative body with authority to act for all nations. Hence the meaning of the term "a census of the world" requires explanation and qualification.

Nearly all the value of statistics is derived from their use in comparisons. For example, we compare the number of people in a state or country at one date with the number at an earlier date, in order to ascertain whether the population is becoming more dense. Then, by comparison of the birth rates and death rates at the different dates, we get some indication of the cause of the increase, decrease, or stationary character of the population. But economic and sociological

* The information upon which this article is based has been derived mainly from a paper by Dr. Josef von Korosi in the last issue of the *Bulletin of the International Statistical Institute*, vol. xi, part 2, pp. 220-250. There will also be found in the *Publications of this Association* (No. 41, March, 1898) an article by the same writer on "Uniformity in Census Returns." This gives the substance of an address delivered by him at the St. Petersburg meeting of the International Institute.

studies must show relations in space as well as in time; and the investigator groups the figures at his disposal so as to show how one section of a country compares with another in regard to the subject of his inquiry. When the statistics for a whole country are gathered and compiled under the direction of a single authority in accordance with a definite plan there is no difficulty in making desired comparisons. But if the statistics to be used have been published by different countries it may or may not be possible to show the desired relations. When the same inquiries have been made with equal care, and the same methods adopted in presenting the results, comparison will be almost as easy as in the case of statistics emanating from a single bureau. But if the same subjects of inquiry have not been chosen, or if different methods have been used in presenting the returns, it will be impossible to use the figures to make the desired comparisons. For example, one cannot compare the number of native white population of native parents residing in Massachusetts in 1890 and in 1895. The Federal census gives the desired information for the former year, but for the latter the State census gives merely the classification of native born and foreign born without regard to parentage. In this case lack of comparability arises from the fact that the Federal and State authorities did not make the same inquiry.

But two census bureaus may put the same questions into the hands of their enumerators and may secure from them equally efficient service, and yet the published returns of their work may not be comparable.

Not only is it desirable to make comparisons in time and in space for a single country, but comparisons for different countries are essential for extended economic and sociological studies. Since the census bureaus of the various governments are independent, one need not be surprised to find that in some lines international comparisons are impossible because the statistics are incomparable. But it is a cause for

wonder that after the efforts of many years to correct this fault, the statistics of different countries still remain incomparable at so many points. This defect is met with even in some of the most fundamental statistical inquiries. Age statistics furnish a striking example. Many census publications contain tables showing the number of persons in each year of age. But in other cases the only age tables published merely group the numbers in periods of five or ten years. Since it is necessary to ascertain the age of each individual in order to publish any complete age tables, it does not appear why in all cases the figures should not be given year by year for the whole period of human life. This lack of detailed age tables for all countries in which censuses are taken is a bar to many interesting investigations. How shall one ascertain the number of men of military age in any country, when its census bureau publishes the ages of the people only in quinquennial or even in decennial groups? Yet the importance of this inquiry was pointed out by General Walker nearly thirty years ago. He wrote: "It is difficult to conceive of any species of information which can, from a practical point of view, have precedence in a census over the determination of the number of males between 18 and 45." *

Another example of lack of comparability is found in the statistics of marital condition. Most census bureaus publish the figures with the fourfold classification of married, single, widowed, and divorced. But in some census publications the numbers of the divorced are not given at all, while in one country they are included with the widowed.

The figures showing the country of birth and the allegiance of the foreign born population are also in many cases far from comparable. Several of the governments, indeed, publish figures showing the number of their population of each sex born in each of the foreign countries. In other cases

* Report of Superintendent of Census, *Ninth Census*, vol. i, p. xxxviii.

the greatest variety is found. In several countries the enumerators do not question the foreign born in regard to the land of their nativity. In others the number of the inhabitants coming from each of the foreign countries is stated, but no division is made to show the proportion of the sexes. England publishes the list only of those born in the British possessions. In Hungary, Italy, and Holland the question of country of birth is asked, but the returns are not elaborated in the census publications.

To give one further illustration of the difficulties which the investigator meets by reason of dearth of uniform statistics, the following quotation is made from a paper by Dr. Ogle:—

I have been tempted to compare the English figures with those of foreign countries. I have, however, rigidly abstained from doing so. Those who have read the laborious treatise of Morselli on suicide, and have noted how heterogeneous in form and how unequal in numerical efficiency were the materials from different countries with which he was forced to be content, will, I think, agree with me that it is at present more essential that statisticians should look to the accuracy and sufficiency of the returns of their own several countries than that they should indulge in premature comparison.*

Such difficulties as these in the way of international statistical comparisons long since attracted the attention of statisticians and enlisted their efforts to secure comparable figures for all civilized countries. About the middle of this century the widespread interest in this question manifested itself in a striking manner in the assembling of an International Statistical Congress. The idea of such a gathering of statisticians came to a group of eminent men from different countries who attended the Industrial Exposition at London in 1851. The renowned Belgian statistician, Quetelet, was the guiding spirit in this movement; and he has told the source of the inspiration which came to him and the other members of the group. Referring to the lack of comparable statistics

* Quoted in the *Encyclopædia Britannica* article on "Suicide,"

which so vexed investigators, and calling attention to the fact that such figures are a vital necessity to statistical science, he says : —

These considerations so simple and so elementary were presented with a new force on the occasion of the great exposition at London, that universal bazaar to which all parts of the civilized world came to display their arts and industry. Before these collected treasures it was not only the confusion of languages which formed an obstacle to the exchange of ideas ; it was above all the inability which one experienced of comparing so many things and of appreciating as a whole the riches of so many nations.*

This first International Statistical Congress met at Brussels in September, 1853. It was called together at the instance of the Belgian Central Statistical Commission, acting on the proposition of Quetelet and Visschers. A provisional program was mapped out, and three sections provided for, in order to facilitate the action of the assembly. It was evident that the promoters of the Congress did not purpose limiting its deliberations to a narrow field. The first section was asked to consider the organization of statistics ; enumeration of population ; registration of births, marriages, and deaths ; real property, its divisions, and registration of surveys ; as well as emigration and immigration. The second section was to consider agricultural censuses and industrial and commercial statistics. To the third section was assigned the consideration of economic budgets of the working classes ; census of paupers ; instruction and education ; criminality and repression.

The membership of this Congress was about one hundred and fifty, representing twenty-six states. In his opening address, as president, Quetelet declared that the first efforts of such an assemblage must be to introduce unity into the official statistics of different countries, and to make their results comparable. For he maintained that without the

* *Compte Rendu des Travaux du Congrès Général de Statistique réuni à Bruxelles, 1853, p. 21.*

possibility of comparison, the science of observation was impossible.

In this spirit the Congress adopted resolutions declaring that the end proposed in their organization had been "more especially to seek to introduce unity into the official statistics which governments publish, and to render their results comparable." "The surest means for reaching the desired unity," they declared, "seem to be the creation for each state of a central commission or an analogous institution, composed of the representatives of the principal branches of public administration, to whom shall be joined certain men who by reason of their studies and special knowledge can throw light upon the practice and resolve the difficulties which pertain essentially to the science." They further advocated "the summing up of census returns in each country in accordance with uniform formulas, which shall render these returns comparable with one another."*

The interest and enthusiasm manifested at this first International Congress opened the way for subsequent meetings; and, indeed, there was need for them if the wide field of activity which had been chosen was to be covered, and if proposed reforms were to be carried out. Congresses were held in succession at Paris, Vienna, London, Berlin, Florence, The Hague, St. Petersburg, and Budapest, nine in all, including the initial one at Brussels. The sessions were held at first two, and later three years apart, the last in 1876. The numbers present at the various meetings ranged from about one hundred and fifty to seven hundred and fifty, and the members enrolled, but not present, from fifty to nearly three hundred.

In 1869 and 1872 it was decided to organize a Permanent Commission.

"Its duties were to publish the resolutions of the Congress; to secure information as to their effect; to promote the possibility of compari-

* *Ibid.*, pp. 143 and 145.

son in the publications of the various states; to prepare subjects for discussion, and request from the various states the statistical material necessary for their investigation; and, finally, to promote comprehensive international statistical investigations.”* Professor Meitzen says that “further assemblies were frustrated by the endeavor to make the commission a permanent organ in the official statistics of the various states, and the failure to see that the practical statistics of any country could not be determined by such a Congress.” He has, however, paid a high tribute to the effectiveness of the measures carried through at these international assemblies, declaring that “everything which has occurred for statistics since the beginning of the Congress has been essentially a consequence of its stimulating and invigorating influence.”†

Another writer‡ sums up the beneficial results of the congresses in eleven paragraphs. Some of the more important ones may be mentioned here.

The meetings brought together the men most capable of representing official and scientific statistical work, and greatly favored the perfection and development of statistical service in all civilized countries. As a result of their work many states established central statistical commissions or other similar institutions, while in several countries bureaus of statistics were created anew, and their organization can be attributed indirectly to the influence of these meetings. To their agency also could be traced progress in census work, in the comparative exposition of the movement of population, modifications and improvements in the statistics of sanitary service, as well as in those of agriculture, industry, commerce, means of communication, banks, public credit, etc. The congresses were also instrumental in bringing about the reciprocal exchange of publications among the bureaus of statistics; and in addition they created an interesting and valuable statistical literature of their own. Among the subjects treated in these publications were the statistics of the

* Meitzen, *History, Theory, and Technique of Statistics*, Falkner's translation, p. 79.

† *Ibid.*, pp. 79, 86.

‡ Neumann Spallart in *Bulletin International Statistical Institute*, vol. 1, pp. 6-8.

condition and movement of population, statistics of great cities, as well as those of mines, merchant marine, banks, and civil justice.

But notwithstanding the congresses exercised such excellent influence along many lines, there were certain faults in their mode of organization or their proceedings which finally led to their abandonment. The writer from whose article a list of the good qualities of the congresses has just been cited, mentions also some of their defects.* In the first place he refers to the invasion of a non-professional or uninitiated element which had been welcomed at the beginning for the sake of extending the interest in statistics, but which soon became a "truly useless ballast," having been attracted by motives which had nothing in common with the serious idea of scientific and official statistics.

Another fault pointed out was the frequent change of men who made up the membership properly so called of the congresses and Permanent Commission. This change led to a number of useless discussions repeated again and again. It often happened that one congress continued work begun by a preceding one, but in a different spirit; and many matters were abandoned, while questions which had already been decided were taken up for discussion from the beginning. But perhaps the most serious fault sprang from the reports of a more or less official nature to the governments, emanating from the congresses, and bearing directly upon the organization of these assemblies. They hindered the free discussion of a number of propositions, while failing to take account of the fact that the resolutions of the congresses or of the permanent commission could in no wise impose obligations on governments. "Nothing was more contrary to the dignity of the congresses and the Permanent Commission than the idea of claiming, on the one hand, an official position without being able, on the other hand, to give a

**Ibid.*, p. 8.

practical value to their resolutions, and without having the power ever to carry them out."

Though these congresses had made an important advance in bringing about uniformity in census inquiries, they had failed in their main purpose, namely, to secure census publications by aid of which extended and accurate international comparisons might be made. In the words of Dr. Körösi they had secured the homogeneity of the raw material but not of the finished product of statistics.

A decade elapsed from the time of the meeting of the last congress at St. Petersburg before the creation of another distinctively statistical organization of international scope. During the intervening period the International Congress of Hygiene and Demography most nearly filled the place of an international statistical organization.

As early as 1882 Dr. Körösi brought to the attention of this body, at its meeting at Geneva, the subject of uniformity in methods of presenting the census figures of different countries. He offered for the consideration of the scientists in attendance at that meeting an international outline which he desired to have adopted in order to secure what he termed "a census of the world, a statistical description of all civilized humanity." To this end he included in it only the minimum number of inquiries the returns from which should be published in accordance with uniform methods in all countries. The outline embraced two parts or schemes. One covered the most important combinations, and it was hoped that so much at least would be adopted without alteration by census bureaus everywhere. The other included less important combinations, and its general adoption was considered of secondary importance. The International Congress of Hygiene and Demography recommended the use of this outline by all bureaus of statistics.

The jubilee meeting of the Statistical Society of London, in 1885, offered further opportunity for interesting the em-

inent statisticians from many countries, who were in attendance, in this important question of uniform methods of treating census returns. At this meeting also an impetus was given to the establishment of a new international statistical organization; and in 1886 the first meeting of the International Statistical Institute was held at Rome. On that occasion the resolutions of the International Congress of Hygiene and Demography, adopted at Geneva in 1882, were referred to a special committee, including many eminent specialists, with M. Troïnitsky, the distinguished Russian statistician, as chairman. Acting on the recommendations of this committee, the general assembly of the Institute unanimously agreed on the desirability and possibility of uniform methods of tabulating census returns, and urged the use of the more important part of the outline proposed by Dr. Körösi four years earlier. A few months later the International Congress of Hygiene and Demography at its sixth session endorsed the resolutions adopted by the Institute.

The project for securing comparable censuses thus received the sanction of both international societies, and there was no longer need to discuss the desirability of the plan. On the other hand, when the Institute met at Berne, in 1895, a further step was taken. M. Guillaume, Director of the Federal Bureau of Statistics of Switzerland, submitted a report in which he took up the question whether, as the end of the century drew near, the time was not ripe for coöperation among the nations in a movement for simultaneous censuses in 1900. He granted that the difficulties in the way of such an attempt were great, but nevertheless did not consider them insurmountable. He showed that some fifteen of the chief governments of the world already had in view enumerating their populations in 1900 or 1901, among them such important ones as the German Empire, Great Britain and Ireland, France, and the United States. Nine of the fifteen had fixed upon either the first or the thirty-first of

December as the census date, though Denmark was to begin the work in February, and the United States in June. Hence, if the effort was to be made to secure a census of every country on the same day or even in the same month, it would be necessary to secure an international agreement through a conference of representatives of the different states.

M. Guillaume further recommended that a certain number of questions, interesting in the same degree in all countries, should be chosen from the outline originated by Dr. Körösi. He also urged the necessity of using everywhere terms of precisely the same signification, in order to secure data exactly comparable. In furtherance of these plans and suggestions the Institute passed without dissent a resolution providing for a special committee which was to report at the next session. Upon them devolved the duty of proposing a convenient date for taking the census in the different countries; of determining upon and formulating questions of general interest to be adopted by all the census bureaus; of defining with precision the terms to be employed in the blanks furnished to the enumerators; and, lastly, of considering the best means of bringing about an understanding among the governments of the world with a view of attaining the desired end. The committee was to consist largely of members of the Institute, who were also in charge of bureaus of statistics in their respective countries.

At the most recent session of the Institute, held at St. Petersburg, in 1897, M. Guillaume reported the answers given by the members of this committee to the question of the feasibility of carrying out the scheme for a universal simultaneous census. While the replies received from the several directors of bureaus of statistics were for the most part favorable to the plan for a general census on or about the same date, it was evidently out of the question to get a complete international census in 1900. Great Britain and France were not ready to make the change of a few months

in the dates fixed for their censuses, which compliance with the plan would require. The governments of both Russia and Spain had provided for a census in that same year (1897); and of course it was not to be expected that they would undertake so great and expensive a work only three years later. But the following states showed an inclination to proceed to the work of taking a census toward the close of the year 1900, *viz.*, Austria, Belgium, Brazil, Denmark, Finland, Hungary, Japan, Norway, Portugal, Uruguay, and Sweden.

Thus while the statistician's ideal of a universal census on a given day is not to be realized at present, one must note a fact which Dr. Körösi himself pointed out, that too much importance should not be attached to the matter of precise simultaneous enumeration. In regard to the matters of age, marital condition, illiteracy, nationality, religion, occupation, etc., this is not absolutely necessary, though, of course, desirable. It was regarded as a matter for congratulation that in the greater part of Europe, in the United States, and even in a part of Asia, censuses were to be taken practically at the close of the century, at dates varying from one another not many months.

In several European countries December is regarded with favor as the month for the census. Certainly the last or the first day of the calendar year is in some respects a suitable date for this purpose. But it is entirely unlikely that our Congress could be induced to provide for a census in the winter. It will readily occur to the reader that over large portions of our vast territory the obstacles which the enumerators would be likely to meet by reason of bad weather would be well nigh insurmountable. Even the much earlier date fixed for our national elections is open to criticism on this score. How much greater then would be the objection to taking the census in the winter.

Frequent reference has been made to the international outline adopted by the Institute and recommended for use

with a view to securing uniform methods in making abstracts of census returns. In offering this scheme in 1882 Dr. Körösi had intentionally omitted one subject, the inclusion of which was necessary to completeness. For statistics of occupations he made no provision, because the difficulties in the way of an international agreement on this point seemed too great to be faced at that time. Credit is due chiefly to Dr. Jacques Bertillon, Chief of Labor Statistics for the City of Paris, for supplying the scheme for filling up this blank in the outline. At the session of the Institute at Paris, in 1889, he had proposed an international nomenclature for forty-eight occupations, and at the meeting at Vienna, in 1891, as the result of collaboration with M. Vanacque, he presented a new outline, classing occupations in ten (later in twelve) chief groups. The scheme was also proposed of offering for the use of statistical bureaus three nomenclatures, comprising respectively sixty-five, ninety-seven, and four hundred and sixty-five headings, the second and third being detailed elaborations of the first. By securing the adoption of one or another of these nomenclatures comparability of the returns for occupations would be had in greater or less detail.

The question of the proper method of treating statistics of occupations is one of the most difficult with which the statistician has to deal. The matter was regarded as so important and complicated that the Institute deemed it unwise to enter upon its discussion at that time, but instead referred the plan proposed to the bureaus of statistics for criticisms and suggestions.

As a result many interesting and valuable observations were made. Perhaps the most important suggestion was to the effect that the fundamental divisions made in the scheme proposed by M. Bertillon should be accepted, while all the sub-divisions should be abandoned. In their stead about fifty of the most important occupations should be chosen, and the figures for these should receive uniform treatment in all countries. It seemed better to secure precise results

to this extent rather than to risk overshooting the mark in the attempt to gain uniformity in a greater number of details. When the Institute met in Chicago, in 1893, this suggestion was adopted, and the importance of the fundamental divisions in the scheme offered by M. Bertillon was emphasized. It was resolved also "that the Institute attaches a great importance to having the census of occupations taken in all countries in accordance with comparable nomenclatures." At the session at Berne, in 1895, a list of forty-eight selected occupations was adopted, eighteen of which were to be regarded as very important, while the uniform treatment of the others was considered only as of secondary value. It was further recommended that the nomenclatures should be translated into several languages, and that a systematic index of occupations should give the meaning of each heading.

The gap which had destroyed the completeness of the international outline was thus filled by the insertion of the scheme which would make possible international comparisons of statistics of occupations. It was not surprising then that Dr. Körösi, after the earnest labors of so many years, became enthusiastic in the close of his report at the St. Petersburg meeting. In his view it was only necessary for the Institute to rally to the support of the propositions of M. Guillaume in order to bring about the mobilization of an army of nearly a million experienced enumerators who should secure material for a scientific description of a population numbering from eight to nine hundred millions, inhabiting a territory of more than twenty-seven million square miles! He pictured "this grand army of disciplined explorers in the field of demology, penetrating almost at the same moment, into the haunts of all civilized humanity, from the huts of the Eskimo to the tents of the Bedouins, from the wigwams of the Redskins to the bungaloes of the East Indies." And at last there was prospect that the various portions of this great mass of sociological material might be presented in accordance with a uniform method and thus attain a value which

had never before attached to international statistics. It needed but the favor of the savants upon whom rested the duty of directing this great operation, to substitute for national censuses an international census of the world, and to raise demography from the low level of heterogeneous and incomparable descriptions to the high plane of an international but homogeneous description of all civilized humanity.

In accordance with the resolutions recommended in the report of Dr. Körösi the Institute voted that the various statistical bureaus should be provided with the international outline and informed of the plans for securing an international census.

What shall be said in closing of the prospect for such a census at the end of our century? In the first place, we have seen that at present we may not hope for a census of the world taken on the same day or even in the same month. On the other hand, it has been pointed out that comparability of the returns for the different countries is the object most to be desired, simultaneous enumeration being much less important. Again it has been shown that while Russia and Spain (and doubtless some less important countries) will not take a census either in 1900 or 1901, yet many of the most powerful and wealthy nations will proceed to this important work in one or the other of those years.

Many of the men who are in charge of census bureaus in various parts of the world are also members of the International Statistical Institute. Furthermore, this project has been discussed and worked over with zeal for many years, and has met with comparatively little opposition. A complete world census in accordance with the ideal of Dr. Körösi does not seem to be a promise of the very near future. Still we may hope that within a few years much more will be accomplished in securing comparable international statistics than ever before. One may not close without paying a tribute to Doctors Körösi, Bertillon, and Guillaume for the zeal they have manifested in urging forward the movement for a census of the world.